

LISTING OF CLAIMS

1-2. (canceled)

3 (original) A recombinant nucleic acid that will hybridize under high stringency conditions to a nucleic acid selected from the group consisting of the sequence shown in SEQ ID NOS 8, 10, 12, 14 and 16 .

4. (original) The nucleic acid of claim 3 comprising DNA having a sequence identical to that shown in the sequences selected from the group consisting of SEQ ID NO 8, 10, 12, 14 and 16.

5. (original) An expression vector comprising transcriptional and translational regulatory nucleic acid operably linked to the nucleic acid of claim 3 or 4 encoding an *Haemophilus* adhesion and penetration protein.

6. (original) A host cell transformed with an expression vector of claim 5.

7. (original) A method of producing an *Haemophilus* adhesion and penetration protein comprising:

a) culturing a host cell transformed with an expressing vector comprising a nucleic acid encoding an *Haemophilus* adhesion and penetration protein; and

b) expressing said nucleic acid to produce an *Haemophilus* adhesion and penetration protein.

8-16. (canceled)